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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,818

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Kazuhiro Iida

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EXAMINER

PAUL, DISLER

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

07/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,818	Applicant(s) IIDA ET AL.	
	Examiner DISLER PAUL	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 19-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/17/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 19-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Baumgaurte et al. (US 2005/0180579 A1).

Re claim 19, Baumgaurte et al. disclose of the audio signal encoding device which encodes original sound signals of respective channels into downmix signal information and auxiliary information, the downmix signal information indicating an overall characteristic of the original sound signals, and the auxiliary information indicating an amount of characteristic based on a relation between the original sound signals, said device comprising: a downmix signal encoding unit operable to encode a downmix signal acquired by downmixing the original sound signals so as to generate the downmix signal information(fig.3 (310); par[0038,0043,0180]); and an auxiliary

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information generation unit operable to: calculate the amount of characteristic based on the original sound signals; when channel information indicating reproduction locations, as seen by a listener, of sounds of respective channels is given, determine an encoding method that differs depending on a location relation of the reproduction locations indicated in the given channel information; and generate the auxiliary information by encoding the calculated amount of characteristic using the determined encoding method (fig.3 (314), fig.4,8-9; par[0047]/level/time difference of original signals) and further notice the claim with wording after "operable" is very broad, since the applicant used the word "operable" /capable and thus my device would have been capable of doing the same functions; the limitation after "operable"/ is not a positive limitation of the claim language).

21. The audio signal encoding device according to claim 19, wherein said auxiliary information generation unit is operable to calculate, as the amount of characteristic, at least one of a level difference and a phase difference between the original sound signals (par [0056,0058-0059,0077]; and further see claim 19 comment for "operable").

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22. The audio signal encoding device according to claim 21, wherein said auxiliary information generation unit is operable to calculate both of the level difference and the phase difference between the original sound signals, and to calculate, as the amount of characteristic, a direction of an acoustic image presumed to be perceived by the listener, based on the calculated level difference and phase difference (par [0013,0039,0040]).

24. The audio signal encoding device according to claim 19, wherein said auxiliary information generation unit is operable to calculate, as the amount of characteristic, a degree of similarity between the original sound signals (par [0104-0105,0112,0113]; and further see claim 19 comment for "operable").

26. The audio signal encoding device according to claim 24, wherein said auxiliary information generation unit is operable to calculate, as the amount of characteristic, at least one of a perceptual broadening and a perceptual distance of an acoustic image presumed to be perceived by the listener, based on the calculated degree of similarity (par [0065,0109,0113]/spatial cues, widening based on coherence; and further see claim 19 comment for "operable").

RE claims 32,34,36 have been analyzed and rejected with respect to claim 19.

Re claim 27, **Baumgaerte et al. disclose of the** An audio signal decoding device which decodes downmix signal information and auxiliary information into reproduction signals of respective channels, the downmix signal information indicating an overall characteristic of original sound signals of the respective channels, and the auxiliary information indicating an amount of characteristic based on a relation between the original sound signals, said device comprising: a decoding method switching unit operable to determine, when channel information indicating reproduction locations, as seen by a listener, of sounds from the respective channels is given, a decoding method that differs depending on a location relation of the reproduction locations indicated in the given channel information (fig.4 (304); par [0173]) ; an inter-signal information decoding unit operable to decode the auxiliary information into the amount of characteristic using the determined decoding method and a signal synthesizing unit operable to generate the reproduction signals of the respective channels, using the downmix signal information and the decoded amount of characteristic (fig.3 (318,322); par [0017,0169]; and further see claim 19 comment for "operable").

30. The audio signal decoding device according to claim 27, wherein the amount of characteristic indicates at least one of a level

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difference, a phase difference and a similarity between the original sound signals, and a direction of an acoustic image, a perceptual broadening and a perceptual distance which are presumed to be perceived by the listener (par [0065,0109,0113]/spatial cues, widening based on coherence).

31. The audio signal decoding device according to claim 30, wherein said signal synthesizing unit is operable to generate the reproduction signal, in the case where the amount of characteristic indicates at least one of the level difference, phase difference and similarity between the original sound signals, by applying a level difference, a phase difference and a similarity which correspond to the amount of characteristic, to a sound signal indicated by the downmix signal information (fig.3 (322); par[0169]/select either ICTD/ICLD for synthesizing; and further see claim 19 comment for "operable").

RE claims 33,35,37 have been analyzed and rejected with respect to claim 27.

20. The audio signal encoding device according to claim 19, wherein said auxiliary information generation unit is operable to retain tables in advance, each table defining quantization points at

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which different quantization precisions are achieved, and said auxiliary information generation unit is operable to encode the amount of characteristic by quantizing the amount of characteristic at the quantization points defined by one of the tables which corresponds to the location relation of the reproduction locations indicated in the channel information(fig.1-4/may be capable of doing above; and further see claim 19 comment for "operable").

23. The audio signal encoding device according to claim 21, wherein said auxiliary information generation unit is operable to retain a first table and a second table in advance, the first table defining quantization points provided laterally symmetrical seen from a front face direction of the listener, and the second table defining quantization points provided longitudinally asymmetrical seen from a left direction of the listener, and said auxiliary information generation unit is operable to encode the amount of characteristic (a) by quantizing the amount of characteristic at the quantization points defined by the first table, in the case where the channel information indicates front left and front right of the listener, and (b) by quantizing the amount of characteristic at the quantization points defined by the second table, in the case where the channel information indicates front left and rear left of the listener (fig.1-4/may be capable of doing above).

Similarly, Re claims 28-29 have been analyzed and rejected with respect to claims 20,23.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DISLER PAUL whose telephone number is (571)270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. P./
Examiner, Art Unit 2615

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2615